FIELD INVESTIGATION REPORT
PHASE II - FIELD INVESTIGATION

FORMER DOD SITES
ANNETTE ISLAND LANDING FIELD
ANNETTE ISLAND, ALASKA

Contract No: DACA85-88-D-0014

Delivery Order No. 13

Report Prepared By: ECOLOGY AND ENVIRONMENT, INC.

Date: November 1989

Submitted To: Garth Beyette, Project Manager Engineering Project Management U.S. Army Engineer District Pouch 898
Anchorage, Alaska 99506



ecycled paper





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### 1.0 INTRODUCTION

Pursuant to United States (U.S.) Army Corps of Engineer (COE)
District, Alaska. Contract No. DACA85-88-D-0014 and Delivery Order No.
13, Ecology and Environment, Inc. (E & E) conducted a sampling investigation of the Annette Island Landing Field located on Annette Island,
Alaska. The project, performed under the Defense Environmental Restoration Program (DERP), represents the second phase of a three-phase process designed to ultimately remediate and/or remove remaining structures, hazardous and toxic wastes (HTW), and petroleum oils and lubricants (POL) at the site. The Phase II investigation is intended to identify potential HTW and POL sources that may require remedial action, and to collect information necessary to develop design criteria for demolition of site structures and removal of other debris. The Phase II investigation is not intended to provide extensive or complete site characterization, contaminant fate determination, or quantitative risk assessment.

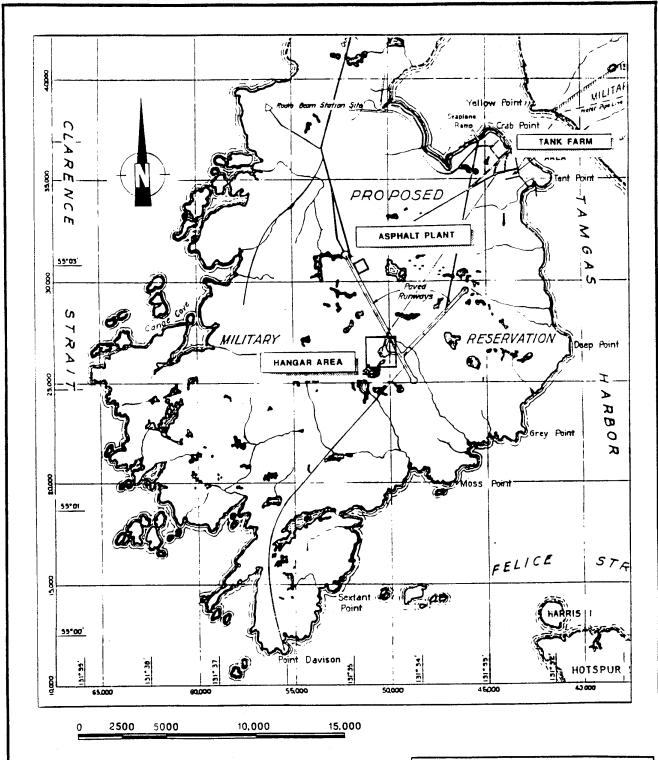
This document provides a summary of the field activities and sampling conducted during the investigation. Included are descriptions of the sites visited, types of transportation required, investigation participants, number and types of samples collected, observations made during work activities and specific alterations to the work plan.

#### 2.0 SITE BACKGROUND

The Annette Island Landing Field (Annette Island site) is located on the southwest side of Annette Island, Alaska. Annette Island is part of the Alexander Archipelago in southeast Alaska, and is approximately 20 miles southwest of Ketchikan, Alaska. The site is situated in Sections 4,5,8, and 9 of Township 79 South, Range 92 East and Section 33 of Township 78 South, Range 92 East, Copper River Meridian (Figure 1).

Annette Island was established as a federal Indian reserve in 1891. In 1940, the United States Bureau of Indian Affairs granted permission to the War Department to construct an air support base for military operations in Alaska during World War II. The site covers a total area of approximately 12,783 acres which includes two airstrips, housing and storage areas, and various weapons installations. In 1949, the site property was transferred back to the Bureau of Indian Affairs. The present owner of the site is the Metlakatla Indians Community Council. Since 1949, various parcels of the site property have been leased to the Federal Aviation Administration, the United States Coast Guard, the Alaska Department of Transportation, and two private airline companies.

A Preliminary Assessment of the site was performed in 1988 and identified three separate areas of potential concern: the hangar and surrounding areas, a former asphalt plant, and a tank farm (Figure 2). Debris and wastes observed during the Preliminary Assessment included electrical transformers, 55-gallon drums containing unknown materials, asbestos-containing insulation, and above- and below-ground fuel tanks.



ANNETTE ISLAND LANDING FIELD
Annette Island, Alaska
CONTRACT DACA85-88-D-0014

TITLE:

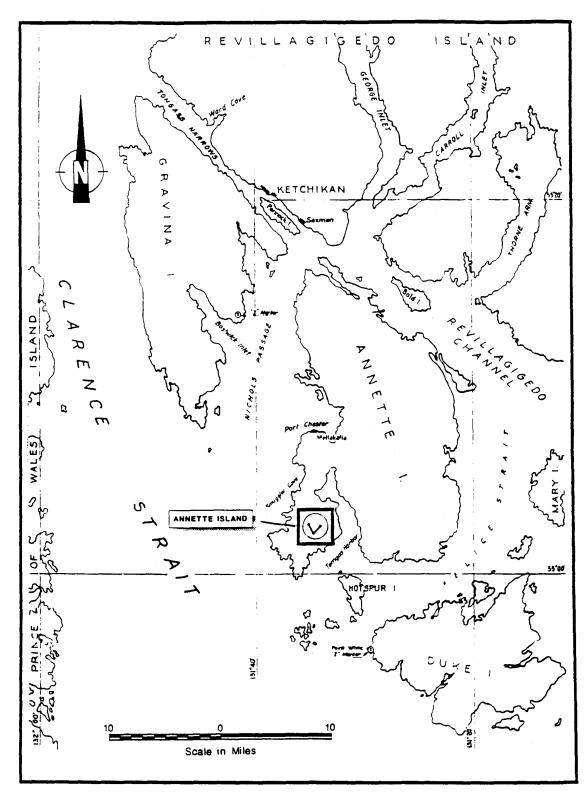
OVERALL SITE MAP

Proj. No. KM 4010

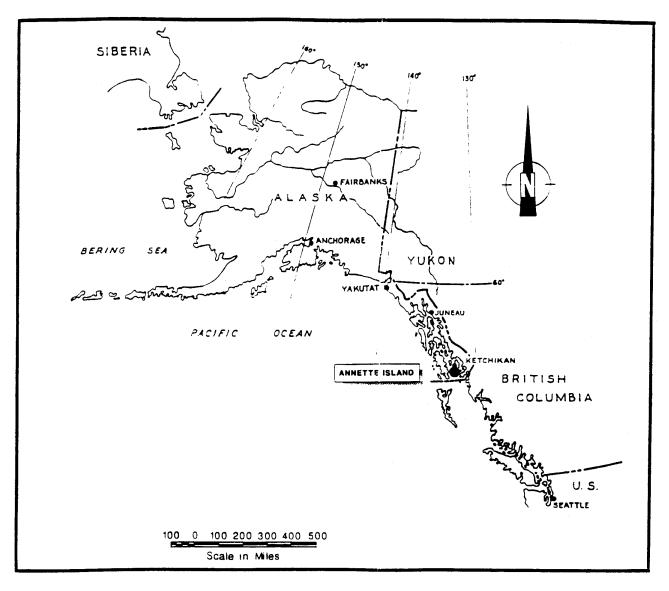
ecology & environment, inc.
ANCHORAGE, ALASKA

FIG. 2

Date: 11/89 Drawn by: RSM Scale:



VICINITY MAP



LOCATION MAP

ANNETTE ISLAND LANDING FIELD
Annette Island, Alaska
CONTRACT DACA85-88-D-0014

TITLE:

LOCATION AND VICINITY
MAP

Proj. No. KM 4010

ecology & environment, inc.
ANCHORAGE, ALASKA

Date: 11/89 Drawn by RSM Scale:

#### 3.0 FIELD ACTIVITIES

The Annette Island field investigation was conducted between October 23 and October 25, 1989. The field team, consisting of Brian Miskill (project manager), William Richards, and Mark Sienkiewicz, traveled from Anchorage to Ketchikan on a commercial airline. The field team was transported from Ketchikan to Metlakatla by a commercial float plane. Dan Romey of the Alaska Department of Natural Resources (DNR) met the field team in Metlakatla and supplied a DNR truck to the field team during the investigation.

The field team established a command post inside the west end of the hangar, and located a water source and telephone at a nearby building. A site safety meeting was conducted prior to the initiation of field activities on October 23, 1989. A summary of the specific field activities conducted at the Annette Island site is presented in Sections 3.1, 3.2, and 3.3. Daily Sampling Reports are presented in Appendix A, and photographic documentation is included in Appendix B.

## 3.1 HANGAR ARBA

Field activities were conducted at the Hangar area on October 23 and October 24, 1989. The areas and structures evaluated at the site include the hangar building, the boiler house, three aboveground fuel tanks, a burned building with potential asbestos insulation, and a collection of 55-gallon drums near the hangar. An underground mogas tank near the hangar was not investigated.

A total of 37 samples were collected from the Hangar area. Table 1 presents a summary of the number, location, matrix, and requested analyses for the hangar area samples. Specific sampling times, personnel, containers used, and observations are included in the Daily Sampling Reports contained in Appendix A.

Table 1

ANNETTE ISLAND LANDING FIELD SAMPLE SUMMARY
HANGAR AREA

ample Number	Sample Location	Matrix	Requested Analytes*
9 43 ANN 001 TR	Transformer outside north side hangar	Transformer Oil	PCBs
9 43 ANN 002 TR	Transformer outside north side hangar	Transformer Oil	PCBs
9 43 ANN 003 TR	Transformer inside north side hangar	Transformer Oil	PCBs
9 43 ANN 004 TR	Transformer inside north side hangar	Transformer Oil	PCBs
9 43 ANN 005 TR	Transformer inside north side hangar	Transformer Oil	PCBs
9 43 ANN 006 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 007 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 008 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 009 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 010 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 011 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 012 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 013 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 014 TR	Trans. storage room, south side hangar	Transformer Oil	PC <b>Bs</b>
9 43 ANN 015 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 016 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 017 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 018 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 019 TR 9 43 ANN 020 TR	Trans. storage room, south side hangar	Transformer Oil Transformer Oil	PCBs PCBs
9 43 ANN 020 TR	Trans. storage room, south side hangar Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 021 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
39 43 ANN 022 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 024 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
89 43 ANN 025 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
89 43 ANN 026 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
39 43 ANN 027 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
9 43 ANN 028 TR	Trans. storage room, south side hangar	Transformer Oil	PCBs
89 43 ANN 043 AS	Burned bldg. near hangar, pipe insul.	Fibrous Insul.	Asbestos
89 43 ANN 044 SL	Between 2 tanks south of boiler bldg.	Surface Soil	VOA, TPH Pest/PCB Metals
89 43 ANN 045 SL	East end tank near boiler building	Surface Soil	VOA, TPH Pest/PCB Metals
89 43 ANN 046 AS	Boiler bldg., boiler insulation	Fibrous Insul.	Asbestos
89 43 ANN 047 DR	East side of boiler building	Liquid	VOA, Pes
89 43 ANN 048 DR	West side of hangar	Oil/Water	PCB, Met
89 43 ANN 049 DR	Drum area in trees west of mogas island	Oil/Water	PCB, Meta VOA, Pesa PCB, Meta
89 43 ANN 050 DR	Drum area in trees west of mogas island	Liquid	VOA, Pes PCB, Met
89 43 ANN 051 DR	Drum area in trees west of mogas island	Liquid	VOA, Pes

<sup>\*</sup> VOA - Volatile Organic Analyses

TPH - Total Recoverable Peroleum Hydrocarbons

Pest/PCB - USEPA Target Compound List (TCL) Pesticides/PCBs

Metals - TCL Metals

Twenty-eight samples were collected from transformers stored inside and adjacent to the hangar. A group of seven transformers located in the northeast portion of the hangar were not sampled because they were fully charged and in use. Several of the transformers have apparently burned and some contained no dielectric fluid. All transformers sampled during the investigation were labeled with metal tags indicating the sample number. Table 2 presents a summary of the number, manufacturer, and serial number of all electrical transformers in the hangar area.

Two surface soil samples were collected from below three aboveground fuel tanks west of the hangar (Figure 3). Both of the samples exhibited a petroleum odor.

Two potential asbestos samples were collected; one from debris located on a concrete foundation of a burned building, and one from insulation on the west boiler inside of the boiler house (Figure 3).

Five samples were collected from drums (Figure 3). Two of the drums were located on the west side of the hangar, one of which was labeled "Chevron 325 Solvent" (sample 048 DR). Three drums located near the mogas station were also sampled (Figure 3). Most of the drums were partially full and appeared to contain mostly water.

The underground mogas tank was not sampled because the access port was padlocked. A key to the lock could not be obtained.

#### 3.2 ASPHALT PLANT

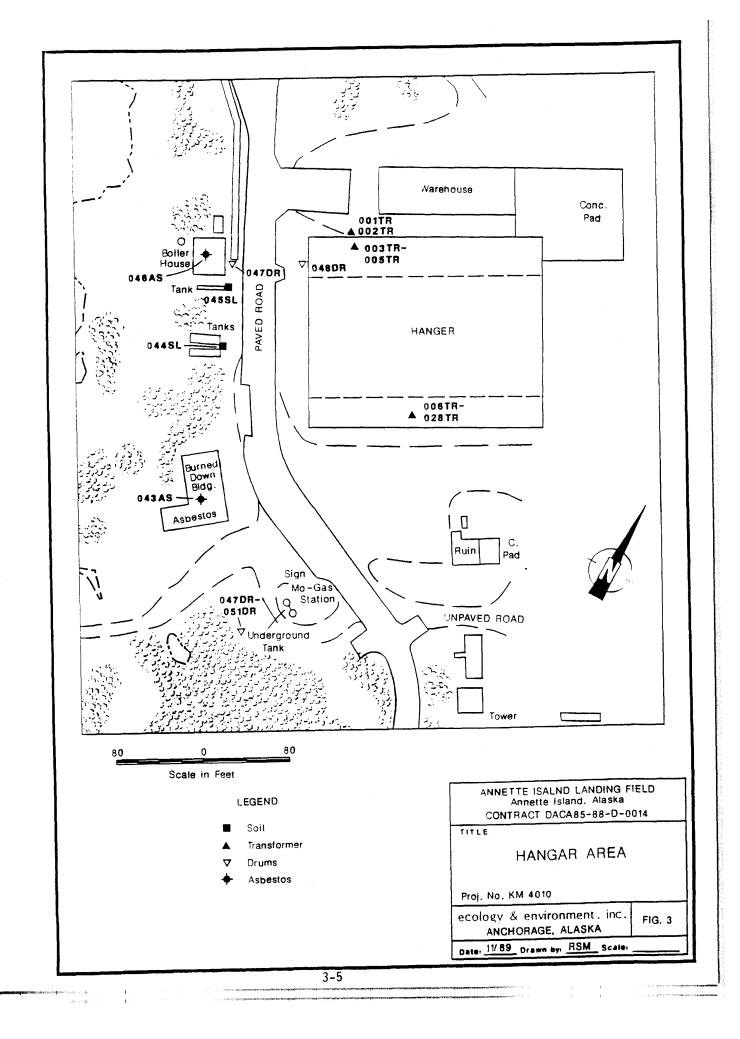
Field activities performed at the Asphalt Plant were conducted on October 24, 1989. Two surface soil samples were collected. Table 3 summarizes the number, location, matrix, and requested analyses of the samples. Specific sampling times, personnel, containers used, and observations are included in the Daily Sampling Reports in Appendix A.

The two surface soil samples were collected from areas of spilled asphalt. The asphalt layers are approximately 2 to 6 inches thick and are very brittle. Several spill areas east of the asphalt plant building were observed (Figure 4). Two asphalt drum samples were

Table 2

ANNETTE ISLAND LANDING FIELD TRANSFORMER IDENTIFICATION SUMMARY HANGAR AREA

Sample Number	Manufacturer	Serial Number	Comments
89 43 ANN 001 TE	General Electric	6810927	Full
89 43 ANN 002 TE		18849111	Full
9 43 ANN 003 TE	•	781127041	Burned, contains ~ 1/2 gal. of
9 43 ANN 004 TE	•	7430	Full
9 43 ANN 005 TE		7034	Full
9 43 ANN 006 TE		B560000	Full
39 43 ANN 007 TE		59SH2233	Full
39 43 ANN 008 TI		59 <b>S</b> J700	Full
39 43 ANN 009 TI		59 <b>S</b> J701	Full
39 43 ANN 010 TI		59 <b>s</b> J702	Full
89 43 ANN 011 T	•	FV312307	Full
39 43 ANN 012 TI		2838166	Full
89 43 ANN 013 T	General Electric	C426219	Full
89 43 ANN 014 T	•	1913066	Full
89 43 ANN 015 T		74VB092009	Full
89 43 ANN 016 T	Allis Chalmers	3678187	Full
89 43 ANN 017 T	RTE Corporation	781126993	Burned; contains ~ 1/4 gal. o
89 43 ANN 018 T	•	7029193	Full
89 43 ANN 019 T		9855709	Full
89 43 ANN 020 T	Westinghouse	59 <b>SH2232</b>	Full
89 43 ANN 021 T		9868456	Full
89 43 ANN 022 T	General Electric	B560002	Full
89 43 ANN 023 T	R General Electric	9863459	Full
89 43 ANN 024 T	Line Material Industries	1964868	Full
89 43 ANN 025 T		B560001	Full
89 43 ANN 026 T	R General Electric	0403693	Full
89 43 ANN 027 T		9863458	Full
89 43 ANN 028 T		1964867	Full
Transformers	McGraw Edison	6-37919-1-100]	Northeast hangar;
	Allis Chalmers	2837629	
	Westinghouse	3263353	
Not	Westinghouse	3263301	present
	Westinghouse	3133557	
	General Electric	6899137	
Sampled	General Electric	6899138	beneficial use
-	General Electric	6899136	
	General Electric	9980708	



identified in the sampling plan, however, all drums located in the asphalt plant area were empty. Most of the empty drums have been stored in a pond approximately 200 feet east of the asphalt plant building (Figure 4).

Table 3

ANNETTE ISLAND LANDING FIELD SAMPLE SUMMARY
ASPHALT PLANT

Sample No.	Sample Location	Matrix	Requested Analytes
89 43 ANN 053 SL	120 feet east of building	Tar	Tar
89 43 ANN 054 SL	50 feet east of building	Tar	Tar

#### 3.3 TANK FARM

Field activities performed at the Tank Farm were conducted on October 24 and October 25, 1989. A total of 13 samples were collected from the Tank Farm area. Table 4 summarizes the number, location, matrix, and requested analyses for the samples. Specific sampling times, personnel, containers used, and observations are included in the Daily Sampling Reports contained in Appendix A.

Twelve soil samples were collected from six locations surrounding the perimeter of the tank farm (Figure 5). Samples were collected from surface soil and subsurface soils at each of the six locations. The subsurface soil samples were collected from depths ranging between 1.5 to 2.5 feet below ground surface (bgs). All of the soil samples exhibited petroleum odors except for those collected from the east and northeast sides of the tank farm (samples 065 SL through 068 SL).

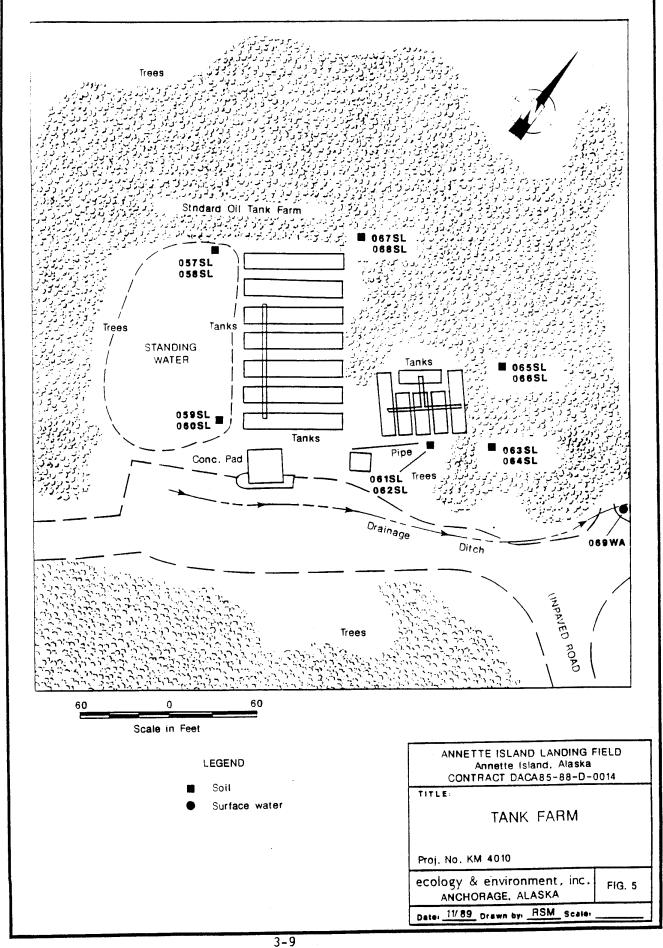
A single water sample was collected from surface runoff entering Tamgas Harbor. The runoff originates from several large puddles in the tank farm area and carried a significant oil sheen.

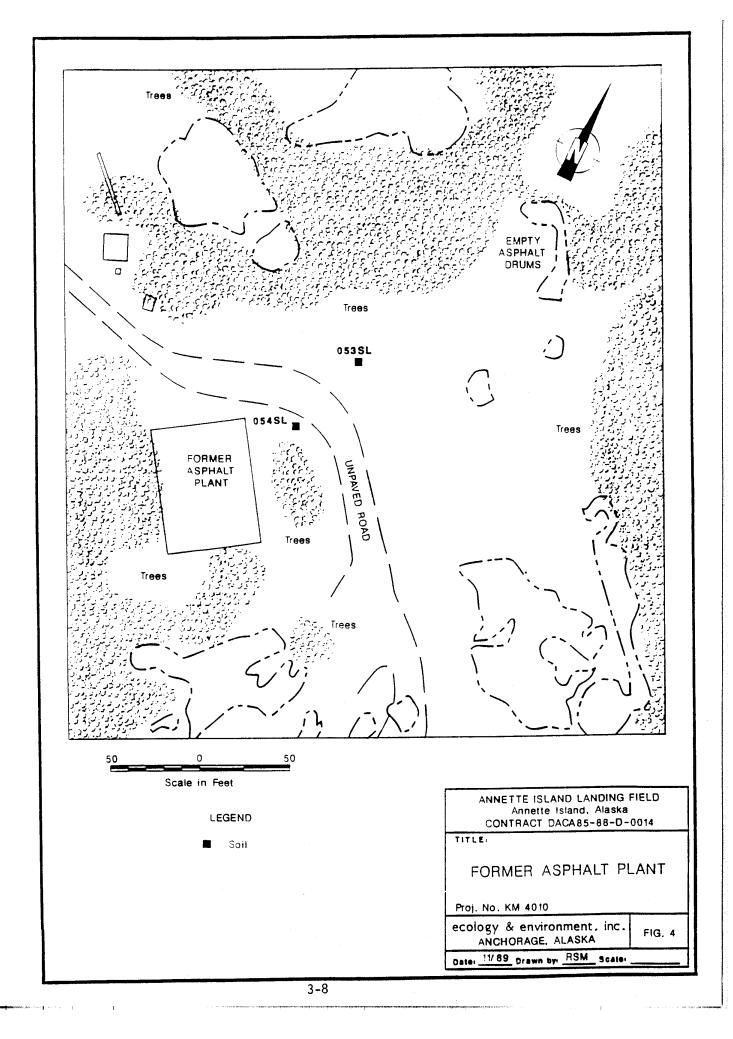
Table 4

ANNETTE ISLAND LANDING FIELD SAMPLE SUMMARY
TANK FARM

Sample Number	Sample Location	Matrix	Requested Analytes*
89 43 ANN 057 SL	20 feet west of northwest tank	Surface Soil	VOA, TPH, Pest/ PCB. Metals
89 43 ANN 058 SL	<pre>20 feet west of northwest tank, 2- to 2.5-foot depth</pre>	Subsurface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 059 SL	15 feet west of southwest tank	Surface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 060 SL	15 feet west of southwest tank, 1.5- to 2-foot depth	Subsurface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 061 SL	20 feet south of east row of tanks	Surface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 062 SL	20 feet south of east row, 1.5- to 2-foot depth	Subsurface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 063 SL	30 feet southeast of east tank	Surface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 064 SL	30 feet southeast of east tank, 1.5- to 2-foot depth	Subsurface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 065 SL	30 feet east of north end east tank	Surface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 066 SL	30 feet east of north end east tank, 2-foot depth	Subsurface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 067 SL	20 feet northeast of northwest tank	Surface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 068 SL	<pre>20 feet northeast of northwest tank, 2-foot depth</pre>	Subsurface Soil	VOA, TPH, Pest/ PCB, Metals
89 43 ANN 069 WA	Stream from tank farm to bay	Surface Water	TPH

<sup>\*</sup> VOA - Volatile Organic Analyses
TPH - Total Recoverable Peroleum Hydrocarbons
Pest/PCB - USEPA Target Compound List (TCL) Pesticides/PCBs
Metals - TCL Metals





#### 4.0 PREPARATION OF QA SAMPLES AND SAMPLE SHIPMENTS

All sampling field notes and chain-of-custody documentation for the investigation are contained in Appendix C and D, respectively,

#### 4.1 QA SAMPLES

Quality Assurance (QA) samples collected during the investigation include field duplicate samples, a rinsate sample, and volatile trip blank samples. A separate volume of each field duplicate was sent to the field laboratory and QA laboratory. Volatile organic compound (VOC) trip blanks were prepared and shipped with each cooler containing samples intended for VOC analyses. A rinsate blank was collected from rinse water from a stainless steel spoon and bowl used for soil sample collection. Table 5 presents a summary of the number, type, and preparation date of the QA samples collected for the project.

#### 4.2 SAMPLE SHIPMENTS

The designated laboratories for the Annette Island project were as follows:

Field Sample Laboratory (except tar samples):

Southwest Laboratory of Oklahoma 1700 W. Albany Broken Arrow, Oklahoma 74012 Contact: Chuck Hoover

Field Sample Laboratory (tar samples only):

South Atlantic Division Materials Laboratory 611 South Cobb Drive Marietta, Georgia 30060 Contact: Lane Tison

#### QA Laboratory:

North Pacific Division Materials Laboratory 1491 NW Graham Avenue Troutdale, Oregon 97060-9503 Contact: Pam Swann

Table 5 ANNETTE ISLAND LANDING FIELD SAMPLE SUMMARY QA/QC SAMPLES

Sar	nple	e Num	nber		Sample Loc	ation	1			Matrix	Laboratory	Requested Analytes*
a o	43	ANN	200	T D	Duplicate	of 90	. 42	A ATRY	010 mm	Transformer Oil	Field	PCBs
		ANN			Duplicate					Transformer Oil		
		ANN			Duplicate					Transformer Oil	QA Fi <b>eld</b>	PCBs PCBs
		ANN			Duplicate					Transformer Oil	OA	PCBs
		ANN			Duplicate					Transformer Oil	ÇA Field	PCBs
		ANN			Duplicate					Transformer Oil	QA	PCBs
0,5	13	MIII	203	IK	Dapiicace	01 0	, 43	WAIN	020 IR	rranstormer Oll	QA	PCBS
89	43	ANN	206	SL	Duplicate	of 89	9 43	ANN	04 SL	Surface Soil	Field	VOA, TPH, Pest/PCB, Metals
89	43	ANN	207	SL	Duplicate	of 89		ANN	04 SL	Surface Soil	QA	VOA, TPH, Pest/PCB, Metals
89	43	ANN	208	DR	Duplicate	of 89	9 43	ANN	04 SL	Oil/Water	Field	VOA, Pest/ PCB, Metal:
89	43	ANN	209	DR	Duplicate	of 89	9 43	ANN	04 SL	Oil/Water	QA	VOA, Pest/ PCB, Metal:
89	43	ANN	210	WA	Bowl/Spoor	n Rins	sate			Water	Field	VOA, BNA, TPH, Pest/ PCB, Metal
89	43	ANN	211	QA	VOA Trip	Blank				Water	Field	VOA
89	43	ANN	212	QA	VOA Trip					Water	Field	VOA
		ANN		_	VOA Trip					Water	OA	VOA
		ANN			VOA Trip					Water	Field	VOA

<sup>\*</sup> VOA - Volatile Organic Analyses BNA - TCL Base/Neutral/Acid Extractables TPH - Total Recoverable Peroleum Hydrocarbons Pest/PCB - USEPA Target Compound List (TCL) Pesticides/PCBs Metals - TCL Metals

The two tar samples were shipped as low hazard materials directly from Ketchikan, Alaskan to the South Atlantic Division Materials Laboratory via Federal Express on October 26, 1989 (Airbill No. 4780375110). The remainder of the samples were shipped as medium hazard materials to Seattle, Washington via Alaska Airlines because restricted articles could not be shipped from Ketchikan via Federal Express. E & E personnel in Seattle received the shipment and delivered the coolers to Federal Express on October 22, 1989. One cooler was shipped to the North Pacific Division Materials Laboratory (Airbill No. 4743263545) and the remaining three coolers were shipped to the Southwest Laboratory of Oklahoma (Airbill No. 4743263556).

All samples reportedly arrived at the laboratories in good condition and included acceptable chain-of-custody documentation. All samples were shipped for arrival at the laboratories within allowable maximum sample holding times.

#### 5.0 SUMMARY

E & E conducted a Phase II sampling investigation at the former Annette Island Landing Field located on Annette Island, Alaska during October 1989. The field team, consisting of three E & E personnel, traveled to Ketchikan by commercial airline and was transported to Annette Island via a commercial float plane service.

Field sampling was conducted at three separate sites within the former Annette Island Landing Field military station. A total of 52 field samples were collected from surface soil, transformer oil, drum contents, and surface water during the investigation. Samples were analyzed for several categories of hazardous substances to determine the potential for abandoned materials at the site to adversely affect human health or the environment and to provide information to be used in the development of design specifications for final cleanup of the site.

Observations made during the site investigation indicate that soil contamination likely exists in the Tank Farm and Asphalt Plant areas. Transformers stored inside the hangar appear to be in good condition and have not been vandalized. Although drums of military origin are present at the site, the contents generally appeared to be mostly water. Surface runoff from the Tank Farm is carrying oil constituents into the adjacent bay.

Samples were shipped from Ketchikan to the respective laboratories via Seattle (except for tar samples) on October 26, 1989. All coolers and samples arrived in good condition at the laboratories, and within the required maximum sample holding times.

# APPENDIX A DAILY SAMPLING REPORTS

#### DAILY SAMPLING REPORT

Contract No. DACA85-88-D-0014 Delivery Order No. 0013

Annette Island Landing Field

Sampling Date:

October 23, 1989

Location:

Annette Island Landing Field

Hangar Area

Sampling Team:

William Richards Brian Miskill Mark Sienkiewicz

Weather:

Clear, 50°F, wind north 20 mph

Sampling Summary:

Hangar Area - 2 transformer oil samples

I. Field Samples

• Sample No: 89 43 ANN 001 TR

Matrix:

Transformer oil

Time:

1745

Sampler: M. Siendiewicz

Location: Transformer outside N side hangar

Containers/Analytes:

1 40ml VOA

**PCBs** 

Transformer contains about a half gallon of oil. No Comments:

stained soil nearby. General Electric serial no.

6810927. Capacity 11 gallons.

Sample No: 89 43 ANN 002 TR

Matrix:

Transformer oil

Time:

1748

Sampler: B. Miskill

Location: Transformer outside N side hangar

Containers/Analytes:

1 40ml VOA Comments:

**PCBs** 

Transformer is full. Moloney Transformer serial no.

18849111.

II. QA/QC Samples

None.

III. Sample Shipping

None.

### DAILY SAMPLING REPORT

Contract No. DACA85-88-D-0014 Delivery Order No. 0013

Annette Island Landing Field

Sampling Date:

October 24, 1989

Location:

Annette Island Landing Field

Hangar Area, Asphalt Plant, Tank Farm

Sampling Team:

William Richards Brian Miskill Mark Sienkiewicz

Weather:

A.M. clear, 45°F, calm.

P.M. overcast, heavy rain, 50°F, calm.

Sampling Summary:

Hangar Area - 28 transformer oil samples

- 2 asbestos samples - 2 surface soil samples

- 5 drum samples Asphalt Plant - 2 tar samples Tank Farm - 1 surface soil sample

- 1 subsurface soil sample

QA/QC - 6 transformer duplicates - 2 surface soil duplicates

- 2 drum duplicates

- 1 rinsate

## I. Field Samples

Sample No: 89 43 ANN 003 TR

Matrix: Transformer oil

Time:

0830

Sampler: B. Miskill

Transformer in hangar, N side

Containers/Analytes:

1 40ml VOA

**PCBs** 

Transformer is burned inside and contains about a half Comments:

gallon of oil. RTE Corp. serial no. 781127041.

Time:

· Sample No: 89 43 ANN 004 TR

Matrix: Transformer oil Sampler: M. Sienkiewicz

Location:

Transformer in hangar, N side

Containers/Analytes:

1 40ml VOA

0825

Transformer is full. Line Material Co. serial no. 7430. Comments:

Matrix: Transformer oil

Time:

Sample No: 89 43 ANN 005 TR 0850

Sampler: M. Sienkiewicz

Location: Transformer in hangar, N side

Containers/Analytes:

1 40ml VOA

**PCBs** 

Comments: Transformer is full. Line Material Co. serial no. 7034. Sample No: 89 43 ANN 006 TR Transformer oil Matrix: Time: 0900 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Transformer is full. General Electric serial no. Comments:

B560000.

Sample No: 89 43 ANN 007 TR Matrix: Transformer oil Time: 0904 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA **PCBs** 

Comments: Transformer is full. Westinghouse serial no. 595H2233.

Sample No: 89 43 ANN 008 TR Matrix: Transformer oil Sampler: M. Sienkiewicz Time: 0908

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA

Comments: Transformer is full. Westinghouse serial no. 595J700.

Sample No: 89 43 ANN 009 TR Matrix: Transformer oil Sampler: M. Sienkiewicz Time: 0913

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA **PCBs** 

Transformer is full. Westinghouse serial no. 595J701. Comments:

Sample No: 89 43 ANN 010 TR Matrix: Transformer oil Sampler: M. Sienkiewicz Time: 0920

Transformer storage room in hangar, S side Location:

Containers/Analytes:

1 40ml VOA **PCBs** 

Comments: Transformer is full. Westinghouse serial no. 595J702.

Sample No: 89 43 ANN 011 TR Matrix: Transformer oil Time: 0930 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA **PCBs** 

Transformer is full. Line Material Co. serial no. Comments:

FV312307.

Sample No: 89 43 ANN 012 TR Matrix: Transformer oil Time:

0928 Sampler: B. Miskill

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA **PCBs** 

Comments: Transformer is full. Allis Chalmers serial no. 2838166.

Capacity 7 gallons.

Matrix: Transformer oil Sample No: 89 43 ANN 014 TR Sampler: M. Sienkiewicz Time: 0932

Transformer storage room in hangar, S side Location:

Containers/Analytes:

1 40ml VOA PCBs

Transformer is full. Line Material Co. serial no. Comments:

1913066.

Sample No: 89 43 ANN 015 TR Matrix: Transformer oil Sampler: M. Sienkiewicz 0934 Time:

Transformer storage room in hangar, S side Location:

Containers/Analytes:

1 40ml VOA **PCBs** 

Transformer is full. McGraw Edison serial no. Comments:

74VB092009.

Sample No: 89 43 ANN 016 TR Transformer oil Matrix:

Sampler: B. Miskill Time:

Transformer storage room in hangar, S side Location:

Containers/Analytes:

**PCBs** 1 40ml VOA

Transformer is full. Allis Chalmers serial no. Comments:

3678187.

Transformer oil Sample No: 89 43 ANN 017 TR Matrix: 0941 Sampler: M. Sienkiewicz

Time:

Transformer storage room in hangar, S side Location:

Containers/Analytes:

1 40ml VOA **PCBs** 

Transformer is burned and contains about 1/4 gallon of Comments:

oil. RTE Corp. serial no. 781126993.

Transformer oil Matrix: Sample No: 89 43 ANN 018 TR

Sampler: B. Miskill 0942 Time:

Transformer storage room in hangar, S side Location:

Containers/Analytes:

1 40ml VOA

Transformer is full. Line Material Co. serial no. Comments:

7029193.

· Sample No: 89 43 ANN 019 TR Transformer oil Matrix:

0947 Sampler: B. Miskill Time:

Transformer storage room in hangar, S side Location:

Containers/Analytes:

1 40ml VOA

Transformer is full. General Electric serial no. Comments:

9855709.

· Sample No: 89 43 ANN 020 TR Matrix: Transformer oil Time: 0958 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: Transformer is full. Westinghouse serial no.

59SH2232.

Sample No: 89 43 ANN 021 TR Matrix: Transformer oil Time: 1001 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: Transformer is full. General Electric serial no.

9868456.

Sample No: 89 43 ANN 022 TR Matrix: Transformer oil Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: Transformer is full. General Electric serial no.

B560002.

Sample No: 89 43 ANN 023 TR Matrix: Transformer oil Time: 1008 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: Transformer is full. General Electric serial no.

9863459.

Sample No: 89 43 ANN 024 TR Matrix: Transformer oil Time: 1010 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: Transformer is full. Line Material Industries serial

no. 1964868.

• Sample No: 89 43 ANN 025 TR Matrix: Transformer oil Time: 1013 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: Transformer is full. General Electric serial no.

B560001.

Sample No: 89 43 ANN 026 TR Matrix: Transformer oil Time: 1017 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCB

Comments: Transformer is full. General Electric serial no.

0403693.

Sample No: 89 43 ANN 027 TR Matrix: Transformer oil Time: 1020 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: General Electric serial no. 9863458.

Sample No: 89 43 ANN 028 TR Matrix: Transformer oil Time: 1024 Sampler: M. Sienkiewicz

Location: Transformer storage room in hangar, S side

Containers/Analytes:

1 40ml VOA PCBs

Comments: Transformer is full. Line Material Industries serial

no. 1964867.

· Sample No: 89 43 ANN 043 AS Matrix: Asbestos

Time: Sampler: M. Sienkiewicz
Location: Pipe insulation in debris at burned building foundation

near hangar.

Containers/Analytes:

1 Whirlpack Asbestos

Comments: White fibrous insulation material. Sample location

tagged.

Sample No: 89 43 ANN 044 SL Matrix: Surface Soil Time: 1335 Sampler: W. Richards

Location: Between 2 fuel tanks S of the boiler building

Containers/Analytes:

2 40ml VOAs VOAs

3 8oz glass TPH, Pest/PCB, metals

Comments: Slight petroleum odor. Soil is gravelly silt, with 1"

loam cover. 1"-5" depth.

Sample No: 89 43 ANN 045 SL Matrix: Surface Soil Time: 1323 Sampler: B. Miskill

Location: Below E end of single fuel tank on S side of the boiler

building

Containers/Analytes:

2 40ml VOA VOAs

3 8oz glass TPH, Pest/PCB, metals

Comments: Slight petroleum odor. Soil is silty sand and gravel,

moist. 1"-4" depth.

Sample No: 89 43 ANN 046 AS Matrix: Asbestos

Time: 1201 Sampler: M. Sienkiewicz Location: Boiler insulation from boiler building near hangar.

Containers/Analytes:

1 Whirlpack Asbestos

Comments: The two boilers appear to be completely insulated with

friable asbestos.

Sample No: 89 43 ANN 047 DR Matrix: Liquid
Time: 1220 Sampler: B. Miskill

Location: Near E side of the boiler building

Containers/Analytes:

2 40ml VOA VOAs

2 8oz glass Pest/PCB, metals

Comments: Contents appear to be water. No label. Drum is half

full.

Sample No: 89 43 ANN 048 DR Matrix: 0il/Water
Time: 1227 Sampler: M. Sienkiewicz

Location: Outside W side of the hangar

Containers/Analytes:

2 40ml VOA VOAs

2 8oz glass Pest/PCB, metals

Comments: Contents appear to be water with homogenized oil.

Labelled "Chevron 325 Solvent". Drum is one-third full.

· Sample No: 89 43 ANN 049 DR Matrix: 0il/Water Time: 1245 Sampler: B. Miskill

Location: Group of drums in trees W of mogas island

Containers/Analytes:

2 40ml VOA VOAs

2 8oz glass Pest/PCB, metals

Comments: Contents appear to be water and oil. No label. Drum is

half full.

Sample No: 89 43 ANN 050 DR Matrix: Liquid
Time: 1253 Sampler: B. Miskill

Location: Group of drums in trees W of mogas island

Containers/Analytes:

2 40ml VOAs VOAs

2 8oz glass Pest/PCB, metals

Comments: Contents appear to be water. No label. Drum is

one-third full.

· Sample No: 89 43 ANN 051 DR Matrix: Liquid

Time: 1256 Sampler: M. Sienkiewicz

Location: Group of drums in trees W of mogas island

Containers/Analytes:

2 40ml VOA VOAs

2 8oz glass Pest/PCB, metals

Comments: Contents appear to be water. No label. Drum is

one-third full.

Sample No: 89 43 ANN 053 SL Matrix: Surface Soil/Tar 1559 Sampler: M. Sienkiewicz Time:

120 ft E of building at former asphalt plant Location:

Containers/Analytes:

1 16oz glass

Tar spill area. Sample is hardened tar, 1" thick. Comments:

Matrix: Surface Soil/Tar Sample No: 89 43 ANN 054 SL

Sampler: B. Miskill Time: 1556

50 ft E of building at former asphalt plant Location:

Containers/Analytes:

1 16oz glass

Tar spill area. Sample is hardened tar, 1" thick. Comments:

Sample No: 89 43 ANN 057 SL Matrix: Surface Soil Time: 1653 Sampler: M. Sienkiewicz

Tank farm. 20 ft W of NW tank. Location:

Containers/Analytes:

2 40ml VOA VOAs

3 8oz glass TPH, Pest/PCB, Metals

Soil is sandy silt, stained. Petroleum odor. Depth Comments:

Subsurface Soil Sample No: 89 43 ANN 058 SL Matrix: Sampler: M. Sienkiewicz Time: 1653

Tank farm. Same location as 057 SL above. Location:

Containers/Analytes:

2 40ml VOA VOAs

TPH, Pest/PCB, Metals 3 8oz glass

Soil is sandy silt, stained. Petroleum odor. Depth Comments:

2'-2.5'.

# II. QA/QC Samples

Sample No.	<u>Description</u>	Lab
89 43 ANN 200 TR	Duplicate of 89 43 ANN 010 TR	Field
89 43 ANN 201 TR	Duplicate of 89 43 ANN 010 TR	QA
89 43 ANN 202 TR	Duplicate of 89 43 ANN 019 TR	Field
89 43 ANN 203 TR	Duplicate of 89 43 ANN 019 TR	QA
89 43 ANN 204 TR	Duplicate of 89 43 ANN 028 TR	Field
89 43 ANN 205 TR	Duplicate of 89 43 ANN 028 TR	QA
89 43 ANN 206 SL	Duplicate of 89 43 ANN 044 SL	Field
89 43 ANN 207 SL	Duplicate of 89 43 ANN 044 SL	QA
89 43 ANN 208 DR	Duplicate of 89 43 ANN 048 DR	Field
89 43 ANN 209 DR	Duplicate of 89 43 ANN 048 DR	QA

· Sample No: 89 43 ANN 210 WA

Time: 1538

Description: Bowl/spoon rinsate

Containers/Analytes:

2 40ml VOA

5 11 amber

1 11 poly

Matrix: Surface Water Sampler: M. Sienkiewicz

VOAs

TPH, Pest/PCB, BNA

Metals

# III. Sample Shipping

None.

### DAILY SAMPLING REPORT

Contract No. DACA85-88-D-0014 Delivery Order No. 0013

Annette Island Landing Field

Sampling Date:

October 25, 1989

Location:

Annette Island Landing Field

Tank Farm

Sampling Team:

William Richards Brian Miskill Mark Sienkiewicz

Weather:

Mostly cloudy, 45°F, calm.

Sampling Summary:

Tank Farm - 5 surface soil sample

- 5 subsurface soil sample - 1 surface water

QA/QC - 4 VOA trip blanks

### I. Field Samples

89 43 ANN 059 SL Sample No: Time: 0841

Surface Soil Matrix: Sampler: M. Sienkiewicz

Location: Tank farm. 15 ft W of SW tank.

Containers/Analytes:

2 40ml VOA

VOAs

3 8oz glass TPH, Pest/PCB, Metals

Comments:

Soil is sandy gravel. Slight petroleum odor. Depth

1"-6". Sample location covered with 3 inches of water

with a sheen.

Sample No: 89 43 ANN 060 SL

Matrix: Subsurface Soil

Time: Location: 0857

Sampler: M. Sienkiewicz Tank farm. 15 ft W of SW tank. Same as 059 SL above.

Containers/Analytes:

2 40ml VOA

VOAs

TPH, Pest/PCB, Metals

3 8oz glass Depth 1"-6". Comments:

· Sample No: 89 43 ANN 061 SL

Matrix: Surface Soil

Time: 0858

Sampler: B. Miskill

Tank farm. 20 ft S of center of E group of tanks. Location:

Containers/Analytes:

2 40ml VOA

VOAs

3 8oz glass

TPH, Pest/PCB, Metals

Comments:

Soil is gravelly sand, stained. Petroleum odor. Depth

1"-4".

Address of the Control of \$11.00 mag.

Sample No: 89 43 ANN 062 SL Matrix: Subsurface Soil Time: Sampler: B. Miskill 0911

Tank farm. 20 ft S of center of E group of tanks. Location:

Same location as 061 SL above.

Containers/Analytes:

2 40ml VOA V0As

TPH, Pest/PCB, Metals 3 8oz glass

Comments: Depth 1.5-2 ft.

Sample No: 89 43 ANN 063 SL Surface Soil Matrix: Sampler: M. Sienkiewicz Time: 0915

Location: Tank farm. 30 ft SE of SE tank.

Containers/Analytes:

V0As 2 40ml VOA

TPH. Pest/PCB. Metals 3 8oz glass

Comments: Soil is organic detritus. Petroleum odor. Depth 1"-4".

Sample No: 89 43 ANN 064 SL Matrix: Subsurface Soil Time: 0929 Sampler: M. Sienkiewicz Location:

Tank farm. 30 ft SE of SE tank. Same location as 063

SL above. Containers/Analytes:

2 40ml VOA VOAs

3 8oz glass TPH, Pest/PCB, Metals Soil is silty sandy gravel. Heavy petroleum odor. Comments:

Depth 1.5-2 ft.

Sample No: 89 43 ANN 065 SL Surface Soil Matrix: Sampler: B. Miskill Time: 0932

Tank farm. 30 ft E of N end of NE tank. Location:

Containers/Analytes:

2 40ml VOA VOAs

TPH, Pest/PCB, Metals 3 8oz glass

Soil is humus above sand, brownish red in color. No Comments:

odor. Depth 1"-8".

Sample No: 89 43 ANN 066 SL Matrix: Subsurface Soil

Time: 0939 Sampler: B. Miskill

Tank farm. 30 ft E of N end of NE tank. Same location Location:

as 065 SL above.

Containers/Analytes:

2 40ml VOA VOAs

3 8oz glass TPH, Pest/PCB, Metals Soil is light colored sand. No odor. Depth 2 ft. Comments:

Sample No: 89 43 ANN 067 SL Matrix: Surface Soil Time: 1000 Sampler: M. Sienkiewicz

Tank farm. 20 ft NE of N tank in W tank group. Location:

Containers/Analytes:

2 40ml VOA VOAs

3 8oz glass TPH, Pest/PCB, Metals

Soil is 2" humus layer covered with needles and leaves. Comments:

No odor. Depth 2"-6".

Sample No: 89 43 ANN 068 SL
 Time: 1011
 Matrix: Subsurface Soil
 Sampler: M. Sienkiewicz

Location: Tank farm. 20 ft NE of N tank in W tank group. Same

location as 067 SL above.

Containers/Analytes:

2 40ml VOA VOAs

3 8oz glass TPH, Pest/PCB, Metals

Comments: Depth 2 ft.

Sample No: 89 43 ANN 069 WA Matrix: Surface Water Time: 1015 Sampler: W. Richards

Location: Taken from small stream flowing from tank farm to bay,

10 ft above the high tide line.

Containers/Analytes:

1 11 amber TPH

Comments: Water is dark (high iron) and has a sheen.

## II. QA/QC Samples

Sample No.		Description	<u>Lab</u>	
89 43 ANN 2	211 QA	VOA Trip Blank	Field	
89 43 ANN 2	212 QA	VOA Trip Blank	Field	
89 43 ANN 2	213 QA	VOA Trip Blank	QA .	
89 43 ANN 2	214 QA	VOA Trip Blank	Field	

## III. Sample Shipping

None.

#### DAILY SAMPLING REPORT

Contract No. DACA85-88-D-0014 Delivery Order No. 0013

Annette Island Landing Field

Sampling Date:

October 26, 1989

Location:

Annette Island Landing Field

Sampling Team:

William Richards Brian Miskill Mark Sienkiewicz

Sampling Summary:

Sample shipping only

I. Field Samples

None.

II. QA/QC Samples

None.

# III. Sample Shipping

- 6 sample coolers were shipped to the field laboratory on airbills Alaska Airlines 027 1355 1495 and Federal Express 4743263556
- 1 sample cooler was shipped to the tar analysis laboratory on airbill Federal Express 4780375110
- · 1 sample cooler was shipped to the QA laboratory on airbills Alaska Airlines 027 1355 1495 and Federal Express 4743263545

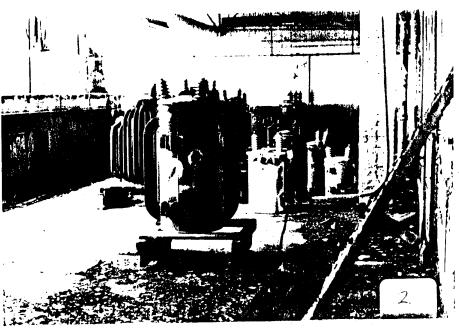
# APPENDIX B PHOTOGRAPHIC DOCUMENTATION

### PHOTO IDENTIFICATION SHEET

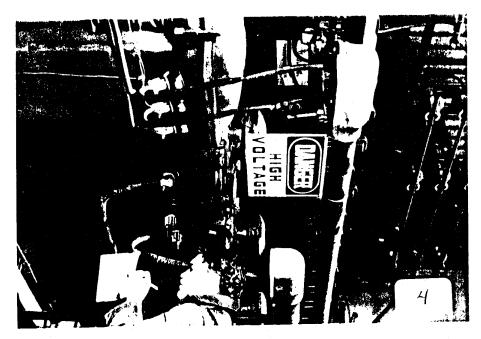
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TYPE	OF	FILM:		SITE NAME:	Annette Island

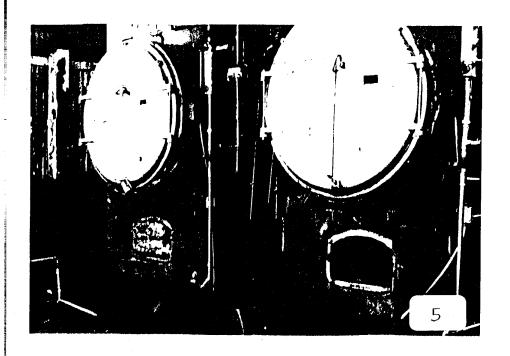
Frame No.	Roll No.	Date	Taken By	Witnessed By	Description of Photo
1	1	10/24/89	B. Miskill	W. Richards	Transformers in south side of Hangar.
2	1	Same	Same	Same	Transformers in south side of Hangar.
3	1	Same	Same	Same	Transformers in south side of Hangar.
4	1	Same	Same	Same	Transformers in northeast part of Hangar.
5	1	Same	Same	Same	Boilers with asbestos insulation.
6	1	Same	Same	Same	Surface soil sample 045SL.
7	1	Same	Same	Same	Drum sample 048DR.
8	1	Same	Same	Same	Drum sample 047DR.
9	1	10/25/89	Same	Same	West side of Tank Farm.
10	1	Same	Same	Same	Soil Sample 059SL.
11	1	Same	Same	Same	East bank of tanks at Tank Farm.
12	1	Same	Same	Same	Oil sheen on surface water near Tank Farm.
		-			









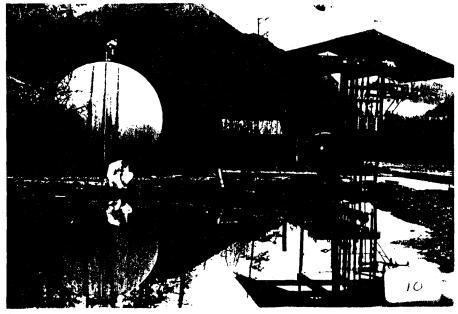


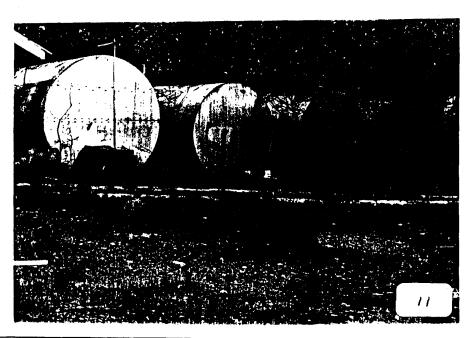














APPENDIX C
FIELD NOTES

#### DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 11/2 to 1.

In the figure below: opposite 7 under "Cut or Filf" and under 3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Filf" and under .1 read 16.7, the distance out from the side stake at right.



Bit         0         .1         .2         .3         .4         .5         .6         .7           Distance out from Side or Shoulder Stake           Distance out from Side or Shoulder Stake           0         0.0         0.2         0.3         0.5         0.6         0.8         0.9         1.1           1         1.5         1.7         1.8         2.0         2.1         2.3         2.4         2.6           2         3.0         3.2         3.3         3.5         3.6         3.8         3.9         4.1           3         4.5         4.7         4.8         5.0         5.1         5.3         5.4         5.6           4         8.0         6.2         6.3         6.5         6.8         6.8         9.9         7.1           5         7.5         7.7         7.8         8.0         8.1         8.3         8.4         8.6           6         9.0         9.2         9.3         9.5         9.6         9.8         9.9         10.1           7         10.5         10.7         10.8         11.0         11.1         11.3         11.4         11.6	1.2 2.7 4.2 5.7 7.2 8.7 10.2 11.7 13.2 14.7 16.2 17.7	1.4 2.9 4.4 5.9 7.4 8.9 10.4 11.9 13.4 14.9 16.4	0 1 2 3 4 5 8 7 8 9
0 0.0 0.2 0.3 0.5 0.6 0.8 0.9 1.1 1 1.5 1.7 1.8 2.0 2.1 2.3 2.4 2.6 2 3.0 3.2 3.3 3.5 3.6 3.8 3.9 4.1 3 4.5 4.7 4.8 5.0 5.1 5.3 5.4 5.6 4 8.0 6.2 6.3 6.5 6.6 6.8 6.9 7.1 5 7.5 7.7 7.8 8.0 8.1 6.3 8.4 8.6 6 9.0 9.2 9.3 9.5 9.6 9.8 9.9 10.1 7 10.5 10.7 10.8 11.0 11.1 11.3 11.4 11.6 8 12.0 12.2 12.3 12.5 12.6 12.8 12.9 13.1 9 13.5 13.7 13.8 14.0 14.1 14.3 14.4 14.8	2.7 4.2 5.7 7.2 8.7 10.2 11.7 13.2 14.7 16.2	2.9 4.4 5.9 7.4 8.9 10.4 11.9 13.4	0 1 2 3 4 5 8 7 8
1 1.5 1.7 1.8 2.0 2.1 2.3 2.4 2.6 2 3.0 3.2 3.3 3.5 3.6 3.8 3.9 4.1 3.3 4.5 4.7 4.8 5.0 5.1 5.3 5.4 5.6 4 8.0 6.2 6.3 6.5 6.6 6.8 6.8 6.9 7.1 5.7.5 7.7 7.8 8.0 8.1 8.3 8.4 8.6 6 9.0 9.2 9.3 9.5 9.6 9.8 9.9 10.1 7 10.5 10.7 10.8 11.0 11.1 11.3 11.4 11.6 8 12.0 12.2 12.3 12.5 12.6 12.8 12.9 13.1 9 13.5 13.7 13.8 14.0 14.1 14.3 14.4 14.8	2.7 4.2 5.7 7.2 8.7 10.2 11.7 13.2 14.7 16.2	2.9 4.4 5.9 7.4 8.9 10.4 11.9 13.4	1 2 3 4 5 8 7 8
1         1.5         1.7         1.8         2.0         2.1         2.3         2.4         2.6           2         3.0         3.2         3.3         3.5         3.6         3.8         3.9         4.1           3         4.5         4.7         4.8         5.0         5.1         5.3         5.4         5.6           4         8.0         6.2         6.3         8.5         6.6         6.8         6.9         7.1           5         7.5         7.7         7.8         8.0         8.1         8.3         8.4         8.6           6         9.0         9.2         9.3         9.5         9.6         9.8         9.9         10.1           7         10.5         10.7         10.8         11.0         11.1         11.3         11.4         11.6           8         12.0         12.2         12.3         12.5         12.6         12.8         12.9         13.1           9         13.5         13.7         13.8         14.0         14.1         14.3         14.4         14.8	4.2 5.7 7.2 8.7 10.2 11.7 13.2 14.7 16.2	4.4 5.9 7.4 8.9 10.4 11.9 13.4 14.9	2 3 4 5 6 7 8
2         3.0         3.2         3.3         3.5         3.6         3.8         3.9         4.1           3         4.5         4.7         4.8         5.0         5.1         5.3         5.4         5.6           4         8.0         6.2         6.3         6.5         6.6         6.8         6.9         7.1           5         7.5         7.7         7.8         8.0         8.1         8.3         8.4         8.6           6         9.0         9.2         9.3         9.5         9.6         9.8         9.9         10.1           7         10.5         10.7         10.8         11.0         11.1         11.3         11.4         11.6           8         12.0         12.2         12.3         12.5         12.6         12.8         12.9         13.1           9         13.5         13.7         13.8         14.0         14.1         14.1         14.4         14.8	5.7 7.2 8.7 10.2 11.7 13.2 14.7 16.2	5.9 7.4 8.9 10.4 11.9 13.4 14.9	3 4 5 8 7 8
3         4.5         4.7         4.8         5.0         5.1         5.3         5.4         5.6           4         8.0         6.2         6.3         8.5         6.6         6.8         8.9         7.1           5         7.5         7.7         7.8         8.0         8.1         8.3         8.4         8.6           6         9.0         9.2         9.3         9.5         9.6         9.8         9.9         10.1           7         10.5         10.7         10.8         11.0         11.1         11.3         11.4         11.6           8         12.0         12.2         12.3         12.5         12.6         12.8         12.9         13.1           9         13.5         13.7         13.8         14.0         14.1         14.1         14.4         14.8	7.2 8.7 10.2 11.7 13.2 14.7 16.2	7.4 8.9 10.4 11.9 13.4 14.9	4 5 6 7 8
4         8.0         6.2         6.3         6.5         6.6         6.8         6.9         7.1           5         7.5         7.7         7.8         8.0         8.1         0.3         8.4         8.6           6         9.0         9.2         9.3         9.5         9.6         9.8         9.9         10.1           7         10.5         10.7         10.8         11.0         11.1         11.3         11.4         11.6           8         12.0         12.2         12.3         12.5         12.6         12.8         12.9         13.1           9         13.5         13.7         13.8         14.0         14.1         14.3         14.4         14.6	8.7 10.2 11.7 13.2 14.7 16.2	8.9 10.4 11.9 13.4 14.9	5 8 7 8
6 9.0 9.2 9.3 9.5 9.8 9.8 9.9 10.1 7 10.5 10.7 10.8 11.0 11.1 11.3 11.4 11.6 8 12.0 12.2 12.3 12.5 12.6 12.8 12.9 13.1 9 13.5 13.7 13.8 14.0 14.1 14.3 14.4 14.8	10.2 11.7 13.2 14.7 16.2	10.4 11.9 13.4 14.9	6 7 8
6 9.0 9.2 9.3 9.5 9.6 9.8 9.9 10.1 7 10.5 10.7 10.8 11.0 11.1 11.3 11.4 11.6 8 12.0 12.2 12.3 12.5 12.6 12.8 12.9 13.1 9 13.5 13.7 13.8 14.0 14.1 14.3 14.4 14.8	11.7 13.2 14.7 16.2	11.9 13.4 14.9	7 8
7   10.5   10.7   10.8   11.0   11.1   11.3   11.4   11.6   8   12.0   12.2   12.3   12.5   12.6   12.8   12.9   13.1   9   13.5   13.7   13.8   14.0   14.1   14.3   14.4   14.8	13.2 14.7 16.2	13.4 14.9	8
9 13.5 13.7 13.8 14.0 14.1 14.3 14.4 14.6	14.7 16.2	14.9	
9   10.0   10.1   10.0   14.0   1.11	16.2	1	9
			II I
10   15.0   15.2   15.3   15.5   15.6   15.8   15.9   16.1	177		10
11   16.5   16.7   16.8   17.0   17.1   17.3   17.4   17.8		17.9	11
12 18.0 18.2 18.3 18.5 18.6 18.8 18.9 19.1	19.2	19.4	12
13 19.5 19.7 19.8 20.0 20.1 20.3 20.4 20.6	20.7	20.9	13
14 21.0 21.2 21.3 21.5 21.6 21.8 21.9 22.1	22.2	22.4	15
15 22.5 22.7 22.8 23.0 23.1 23.3 23.4 23.6	23.7	25.4	16
16 24.0 24.2 24.3 24.5 24.8 24.8 24.9 25.1	25.2 26.7	26.9	17
17 25.5 25.7 25.8 26.0 26.1 26.3 26.4 26.6	28.2	28.4	18
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North Paulic Division Malends Laboratory

1191 New Graham Hare

Trockdock, ER GREC-9503

Contact: Fam Sucre 503-665-4166

Field Lab Coxcept asphalt)

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Field Lab for Ashalt Gardes only Field Lab Fox Az Natt Sanda only South Atlantic Disson Materials Laboratory 611 South Costs Drive Manetta, GA 30060 Contact: Lang Tison 404-421-525 stotal Cill to Den Romey - just toucher

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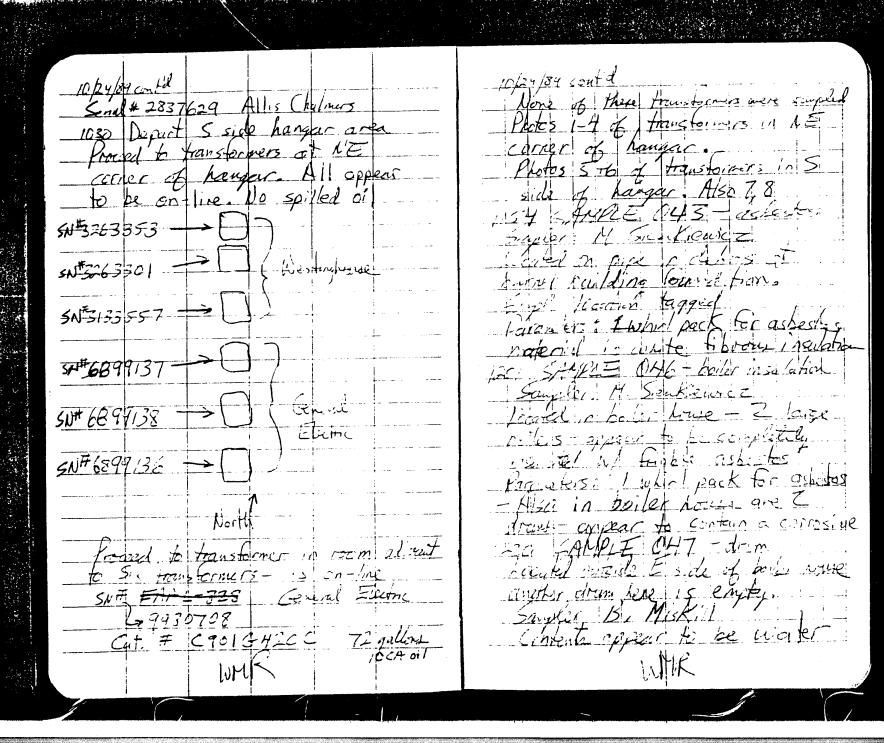
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0928 SAMRE 012 - Hanstorner Sapler B Miskin 13677187 Allie Challete Joseph S side of hangar 1 40 ml boat for PCB = 2838166 Allis Chalners 1 941 SAUPLE DIT - transfermer Scapler M. Sign Keurd z 7-gal oil 1 4Cml will for PCB Virely 5 side house Transtamer is burned, Contra <AMPLE 011 - franstormer shout 14 sallon oil Soupley M Sienkien 1= Send # 78/126993 STE Cup. Bucks 1 Hal ial for 1813 Sempl # FV3/2/307 Die Hakral G 942 SAMPLE 018- transfer 40 ml 1014 F- 1963 Surple B Misk !! SAMPLE OIH- TOWNSTONER S side of bungar halfel S side of heteror CEDIC # 7029193 Line Makerial Co Franks 1 46 ml will 6. P.B. Sen 1 = 1913066 Lin Fickenil C - Transferencer Eschal #6-37919-1-100 M. Gran Edison - Peli Ster Trans Suprer Paraueters: 1 40ml and for PCB 2034 SAMPLE 015- transfermer 15 comply - m sample colicied Smyler: M Sientieun = CAMO SAMPLE CV9- troops Trustined is full - S. S. L. harger DUPS 202 + 203 Simul # 7408092009 Horas Edism Sampler B Hiskill Parenetis I Ham vill tor ROB Located 5 side of homar 0938 SAMPLE CIG - + Ins = ----Supler B. Mis Kill Transformer 15 Gal

10/24/89 contel Cerial #985 709 Feneral Electric Parameters: 1 Hinl was (x7 Griding) for PCB 0158 SAUPLE 020 - transformer Sampler M Sienkiewicz Locatel 5 side of houges - full Send # 575 H223Z Westinghouse Parometers: Houl only for PJB 1001 SAMPRE CRI - Hunstorner \_ Sampler: H Sienkieurez Located 5 st. la of Januar full Sand # 9268456 Central Elieton Parmeters 1 4 ml vol for PEB 1003 SAMPLE 022 - fram Corner Sangler: A Sienkiewick Landed S & de harger - full Send + 356000 Count Electric Paremeters. I tent und for PCB 1008 SAMALE 033 - transferment Supler: M Significance Located 5 side huga - tell Seret 9363459 Gerend Elatric facultos 11 4th had for FiB 1010 SAMPLE 024- transformer Sampler M. Sienk Zwicz Located 5 i de of hargar - fall

Seinl # 1964362 Line Makegal Includies Paranters: 1:40ml vial for PCB 1013 SAMPLE 025 - transformer Sampler M. SignKiew. LZ Located Side Kenzer-full Sevial # B360001 General Elictric Paremeters: 1 40ml yill for PCB 1017 SAMPLE 026 - transformer Sangler M. Sienkieurez Sound # 0403693 General Elichic Parales, 1 Gal wal for AB 1620 SAMPLE CAT- transformer Soupler H. Sienkrounez Somethis 1 40 al val Con PCB 1024 SAMPLE C28 - transfer DUPS 204+205 Surpler: M. Sierkiewicz Locatel 5 side hangur - E. L. Senil # 1964867 - Line Makeril Indiaher Paramers. 1 40ml viel (x2 6- tup) for PCB - Small transformer in S side hampar!



24 By conty Faranciers & Z Hal vial for Joh; 2802 for P. PeB, Metall SAMPLE 050 - drum Dain located new 549-13, full m is not labelled 1/2 fall Content appear to be water Foranctes 2 40 ml vials 1 3 802 Frame - We sould sample a docum outside SAMPLE 048 - drum 125455 WR (ALILE 057 -, drin Signer : M. Sienken , ~ DURS 208+209 Contents: appears to be with Locastel partende at end of house Labeled Cherron 325 Somet Sampler: B. Hiskill Contents appear to water w/ homesimed Jocated on E and of single tent just 5 of boiler room - slight petroleum oder. Soil is silty sand Paramers: 2 40 link to UCA, for PPCB and Metals and gravel - moist 1-4" depth - Photos 9 10 - bailers faranchers. Z 40 ml NOA, 3 802 For TPH, P/PCB, Metals Pluro 11 - Souple 547 1335 SAMPLE DUS 044 - SOIL DUPS 206 + ZC7 Supler B. R. hards love to the Was Regard of the Tooked between 2 touts south of boiler room - slight petrolium odor. Sil is growelly silt w/1" loam cover. Depth 1"-5" Varaneters: Same as C45 WHIR

10/24/09 contid Weather update: heavy rais started a bent 7 hrs. aga, 50°F, no wind. 1405 Depart site for humb 1515 Arrive back on-site - Brian + Bill clerk out UST - the tank to see if there is a key. Won't sample this for now. 1538 SAMPLE 210-bowl/spoon missate Saupler: H. Sienkiewicz Prepared in hangar Parameters: Z 40 ml UDA A 1-l amber for BNA/ P/PCB, TPH, I 1-A poly 1550 Depart hangar area for the asphalt plant area. 1556 SAMPLE 054 - Soil Sampler: B. Miskill Located 50 east of building at asplant plant in area of spilled for Parameters: 1 1602 for the analysis
1559 SAMPLE D53-50il
Sampler: M. Sien Kiewicz Located 120' E of building - spill area Paramers: 1 1602 for for analysis

10/24/89 contid We recoved the area for drums All are either empty, contain solid material, or contain water No ton drums to sample here. An empty pord @ 300' east of the building.

Some spilled tax noted.

1620 Depart Asphalt Plant area

1645 Depart transcr for tank form 1650 Arrive tout form
Area W of tanks is fearly strued
and cornered by 1-6" of water
1653 SAMPLE 057 - Soil Surpler: M Sie Kleinicz Scil 15 Staned - Actorleum over Savely silt Depth - C-6"
hacated 20'11 of N most tank
west trink of I large to his
Parameters: 2 Heart Was, 3 802 for
TPH, PIPCB, Metals 1658 SAMPLE 058 - SOIL Suplei M. Sichtieurcz Same location so I and parameters as 057 except digth = 2-2/2; 1705 Depart Tount form for today

10/24/84 conta 10/25/89 tank farm work, sample sacking and ship samples.
1750 Depart Site.
10/25/89 Weather: mostly cloud, 40F, no wind 0800 Arrive on site Freparing Sangle Containers 0835 Arrive tank farm area 0841 SAMPLE 059- soil Sorder H Sientieucz Localed 15 west of 5 tack of Located 15 west 7 5 tech of

W back of teachs - sauche location

Covered by 3" woter with sheen

Soil is sauly graced - slight

Certologue odor Repth = 1-6"

Parameters: 2 Hond Upt 3 803

For TPH, PIRB Metals

O857 SAMPLE C60 - 501

Surples: H. Sienkien - 2 Same location soil, and parameters as 059 except depth = 11/2-2 feet 0858 SAMPLE 061- 5011 Spurgler: B. Miskill Located 20 5 of E bank of tanks, Rept = 1-41. Soil is gravely WHR

said - petroleur odor + staned Parameters 2 40al WA 3 802 For TPH P/PCB and Hetale 0911 SAMPLE DAZ -SOIL same location sail, and parameters as 61, except depth = 11/2-2 fait
0915 SAMPLE 063-501 Sampler M. Sienkiewie Z Lucaked 30' SE from E tank ox E bouk of tanks in a small depression near feeter lines to tanks.

Soil is arganic detribus. Depth 1-4". Refrolessen odor. Parameters : Z 4018, UDA, 3802 for TPH, P/PCB Hetals 0929 SAMPLE 064-5011 Surpler: M. Sienkiewkz Same laution as 063. Soil is silter Sandy gravel, heavy petroleum ofor Depth = 1/2-2' Same parameters 0932 SAMPLE 065 - soil Sampler: B. Miskill Located 30' east of the N end of above said ("10" hume.). No odor

10 /25/84 cont'd he high tide line . Water is oth = 0-8". Soil is brownish rad (high iron) and how a steen. 2 40 ml vox, 3 802 for Parapetes: 1 Il bottle for TAH TPH P/PCB and Metals 0939 SAMPLE 066 - Soil 1030 Vepart tank tarm Sarpler = B. Miskill Atternote - all tanks at tank from Sand location as 065. Depth Z' seem to be empty although this was Soil is light colored sand set checked with a dip-stick. Also, while driving around the bove, neverous. druns, equipment, and debris can be M. Sierkiewicz seen abindended in woods and 1 20 NE of N tank of West marsher. ( in deep forest. | Soil is 100 - Sumple Packing 212 humes layer covered a/reedles - UCA Top Blank 8943ACN STO GA Paravelers: 2 40 nl VOA 3 doz for For all franformer samples and - UCA Try Blank 8943ANN 211QA TPH, P/PCB, Hetale. 10/1 BAMPLE 068- SOI for OSI and DIC and C69 apler M. Sienkiewicz - UUA TEIP Blank 8943 ANNZIZEA location as 067 except Ge 201, 203, 205, 209, 207 depth. Soil is - year Trip Blook 8943 AUN ZIM GA ne paraveters. for OSO and all soils to field lab. 1015 SAMPLE OG9- Surt. water Sampler: B. Binhande 1400 Depart site for girport Apricat of MuHaKaHa at Located on stream flowing from tou WMK

### APPENDIX D CHAIN-OF-CUSTODY FORMS



### ecology and environment, inc. 195 SUGG ROAD, P.O. BOX D, BUFFALO, N.Y., 14225, TEL. 716-632-4491 International Specialists in the Environment

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CHAIN-OF-CUSTODY RECORD

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